MEMORANDUM OF AGREEMENT AMONG

THE UNITED STATES NAVY, REPRESENTED BY THE NAVY HISTORY AND HERITAGE COMMAND (N09BH) (NHHC) AND ITS DESIGNATED EXECUTOR FOR

THE UNDERTAKING,

THE NATIONAL NAVAL A VIA TION MUSEUM (NNAM),
THE ADVISORY COUNCIL ON IDSTORIC PRESERVATION (ACHP)
AND

THE ILLINOIS HISTORIC PRESERVATION OFFICER (ISHPO)
REGARDING

THE RECOVERY OF ONE NAVY OWNED WWII ERA AIRCRAFT (F4U-1 Corsair)

FROM THE ILLINOIS WATERS OF LAKE MICHIGAN

WHEREAS, the United States Navy (Navy), represented by the NNAM, has initiated the recovery of a Navy owned F4U-1 Corsair (Bureau Number 02465) (the undertaking) for the purpose of long term preservation/conservation of the aircraft for historic and educational purposes that are in the interest of the Navy history program, the region of the Great Lakes represented in part by ISHPO and the general public; and

WHEREAS, it is the ISHPO position that the F4U-1 Corsair is considered part of a group of aircraft that is the only known collection of historic WWII era Navy aircraft preserved in cold, fresh water; and because of the regional and national significance of the aircraft group, the significant battle service of some of these aircraft, their importance in the training of carrier pilots in aircraft landings and takeoffs, their possible association with important people, their possible rarity of type and the archeological significance of the Navy aircraft group, they appear to meet the criteria for listing in the National Register of Historic Places; and

WHEREAS, the ISHPO believes that *in situ* preservation is the preferred management option but recognizes the public benefits to be gained from preservation and exhibition; and

WHEREAS, decisions about whether to recover or manage in place a Navy historic aircraft are made by the Director NNAM, in consultation with Director NHHC, and the determination has been made that the protection from the damaging affects of the aircraft submergence along with historic benefits call for recovery of the aircraft, and after considering the views of the ISHPO and other qualified history and preservation experts; and

WHEREAS, it is the ISHPO position that the undertaking will have an adverse effect on the F4U-1 Corsair and the WWII era Navy aircraft group in Lake Michigan; and

WHEREAS, it is the position of the NNAM that the undertaking may have an adverse effect, but that it is in the public interest to recover, preserve, and exhibit this important historic aircraft.

WHEREAS, the ISHPO has a direct interest in the aforementioned goals relating to the history of the Great Lakes region, and has participated in the consultation to seek ways to avoid, minimize, or mitigate adverse effects pursuant to the regulations of the ACHP implementing Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f)(NHPA); and

WHEREAS, pursuant to 36 C.F.R. § 800.6(a) (I), the NNAM notified the ACHP of the adverse effect finding by providing the documentation specified in 36 C.F.R. § 800.11(e), and the ACHP has elected to participate in the consultation; and

WHEREAS, other aviation historical associations and museums have been or will, on request, be provided the opportunity to comment on this undertaking,

NOW, THEREFORE, NNAM, the ACHP and ISHPO agree that the undertaking will be implemented in accordance with the following stipulations that take into account the effect of the undertaking on historic properties while safe guarding the interests of all parties in preserving the nation's history and heritage.

Stipulations

The NNAM will ensure that the following measures are applied.

- 1. Standards for the Undertaking
 - A. The Undertaking will be conducted in consideration of and for purposes consistent with the NHPA applicable rules, regulations, U.S. Navy mandates, federal guidelines and any other applicable law, rule or regulation, including the following;
 - (i) Secretary of the Interior Standards and Guidelines for Archaeology and Historic Preservation, 48 Fed. Reg. 44,716-44,740 (Sept 29, 1983);
 - (ii) Guidelines for Evaluating and Documenting Historic Aircraft Properties (National Park Service, 1998);
 - B. The parties to this MOA recognize that the NNAM, as a division of the Navy, cannot issue a permit to itself for property it owns. However, the undertaking will be conducted in a manner consistent with the appropriate policies and recommended practices outlined in 32 CFR Part 767, Application Guidelines for Archeological Research Permits on Ship and Aircraft Wrecks under the Jurisdiction of the Department of the Navy, as may be applied by NHHC.
 - C. Associated with the above, all documents, studies and proposals produced for and as a result of this undertaking, especially the aircraft recovery and rework plans (preservation and curation) induding documentation, recordation and reports generated will comply with the NHHC determined applicable laws, regulations and guidelines described in LA. and 1.B. and will be produced and made a part of the record as well as provided to the signatories of this agreement as required.

2. Recordation

A. Prior to the commencement of any recovery activity, NNAM will record the F4U-1 Corsair, Bureau Number 02465 in its present location to create a permanent record of its existence prior to it being removed. The recordation will be that of video and/or still photography. NNAM will provide copies of the recordation package to the ISHPO for placement in the Abraham Lincoln Presidential Library and appropriate local repositories designated by the ISHPO. Associated with the above will be diagrams of the geographic area and relative position of the aircraft on the bottomlands.

- B. Included with the above will be a copy of the Aircraft History Card and Aircraft Accident Report Summary, which denotes the specific history of this individual aircraft up to and including its final flight, as recorded by the Department of the Navy.
- C. The video history of the World War II operation in Lake Michigan, including examples of previous NNAM undertakings in Lake Michigan, will be provided to the ISHPO.

3. Recovery

- The Navy approved plan for the pre-recovery, recovery and immediate post-A. recovery operation and the specific Navy requirements for this type operation will be provided to the ISHPO and attached to this MOA as APPENDIX 2. The plan includes requirements for and actual preparation for transport and stipulations for accountability and preservation during transport. In addition, the Navy will provide certification of issuance of all necessary permitting up to and including a joint Army Corps of Engineer permit. This documentation of the recovery process and post -recovery preparation for transportation will be submitted in the form of a narrative description as well as a video. This documentation will also include a description of the pre-recovery site preparation, the actual recovery process, and a post-recovery report on the affected site. Also included will be a submission of the coordinates and water depth of the aircraft. The documentation will be overseen by an Archaeologist meeting the Secretary of the Interior's Professional Qualifications for Archaeology (48 Federal Register 44738-39, September 29, 1983) with a demonstrated familiarity with underwater archaeological investigations.
- B. The ISHPO, at its discretion and expense, may wish to provide a qualified Archaeologist specializing in underwater archaeology to observe the aircraft recovery from Lake Michigan.
- 4. Preservation and Curation: Interface among MOA parties specified in this section does not imply or require agreement.
 - A. The NNAM will perform any immediate stabilization work deemed necessary following the recovery of the aircraft.
 - B. Based on a post recovery assessment of the aircraft's condition, a long term post-recovery plan that will cover all Navy actions to be taken will be developed by NNAM. The plan will include preservation and disposition declarations. The specifics of this post-recovery plan cannot be determined until completion of the post recovery assessment.
 - C. The NNAM will provide the ISHPO with a copy of the post recovery assessment as soon as it is available.
 - D. The parties to this MOA agree that preservation and curation of the aircraft is the responsibility of NNAM in consultation with NHHC. Rework, which can range from cleaning and preservation" as is" when recovered to full return of the aircraft to a "like new" appearance (or any combination within this range.) The rework objective will be determined after post-recovery assessment based on condition of the aircraft components and equipment, and the needs of the Navy History Program. In any Rework Plan, the preservation and

conservation of the absolute maximum of historical relevance, originality, and accuracy will be the stated objective.

- E. The NNAM will consult with the ISHPO as it develops the rework objective and the rework plan, which includes rework action deemed applicable that may consist of preservation/conservation/restoration and disposition actions. The ISHPO will provide any comments on the rework plan and objective within thirty (30) days of receipt of relevant information, which the NNAM will consider.
- F. The NNAM will provide the final rework plan to the parties to this MOA prior to commencing rework activities.
- G. In accordance with Appendix 3, NNAM agrees to the following practices for rework (stabilization actions immediately following recovery is excluded from this requirement.)
 - (i) Historical research and comparison with similar existing aircraft will be used to identify those features and equipment that were a part of the functioning aircraft.
 - (ii) NNAM will carefully document its decisions and actions as it carries out the rework activities, including detailed records of all original features, material, or equipment removed, replaced or modified.
 - (iii) Where possible, replacement of missing equipment or features will be the exact kind and period of manufacture as was on the original aircraft.
- H. Hazardous Material Handling will be made in accordance with applicable requirements submitted and made a part of the record.
- I. Upon completion of the rework, the NNAM will provide the parties to this MOA with a rework summary, which includes the preservation/conservation/restoration and disposition actions taken by the NNAM. The plans and reports submitted to the ISHPO and ACHP will be identical to those required by and submitted to the NHHC.
- J. Regardless of rework objective or where it is displayed, this aircraft will remain the property of the U.S. Navy, who will be responsible for its preservation and handling.
- K. Upon completion of all planned rework to undertaken, the aircraft will be placed in NNAM or in a venue that meets the criteria of NNAM for loan approval. A requirement for presentation in any venue will be a mandate that a history of the aircraft and its association with the Great Lakes area and the State of Michigan be made a part of the presentation of the aircraft. Text of that interpretation will be made available to the ISHPO for comment prior to the aircraft's disposition.

5. Other Considerations

A. NNAM will be responsible for meeting any applicable Federal, State or Local requirements by law or regulations that are applicable to this undertaking that

are outside the scope of ISHPO responsibility. This includes appropriate liaison with the ACHP, which is a signatory to this MOA, and of the other reports mentioned that may be requested. It also includes any other requirements that may be appropriate under the Section 106 process.

- B. In view of the extensive consultation between NNAM and ISHPO preceding this MOA, signatures to this document will constitute full agreement on the undertaking as specified herein.
- C. This MOA will be considered completed with the submission of the completed rework reports to MOA parties.
- 6. MOA Amendment, Dispute and Termination Clauses
 - A. Amendments: Any signatory to this Agreement may propose to the other signatories that it be amended, whereupon the signatories will consult in accordance with 36 C.F.R § 800.6(c) (7) to consider such an amendment.
 - B. **Dispute Resolution:** Should any signatory to this Agreement object to any action taken or proposed by the NNAM not covered by, nor included in this Agreement, the NNAMINHHC (as appropriate) will consult with that signatory party to resolve the objection. If the NNAM after initiating such consultation determines that the objection cannot be resolved the NNAM will forward documentation relevant to the objection to the ACHP, including the NNAM's proposed response to the objection. Within forty-five (45) days after receipt of all pertinent documentation, the ACHP will exercise one of the following options.
 - (I) Advise the NNAM that the ACHP concurs in the NNAM's proposed final decision, whereupon the NNAM will respond accordingly;
 - (2) Provide the NNAM with recommendations, which the NNAM will take into account in reaching a final decision regarding its response to the objection; or
 - (3) Notify the NNAM that the objection will be referred to the ACHP membership for formal comment and proceed to refer the objection and comment with forty-five (45) days. The resulting comment will be taken into account by the NNAM in accordance with 36 C.F.R. §800.7(c) (4).
 - (4) Should the ACHP not exercise one of the above options within forty-five (45) days after receipt of all pertinent documentation, the NNAM may assume the ACHP's concurrence in its proposed response to its objections.
 - (5) The NNAM will take into account any ACHP recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection; the NNAM's responsibility to carry out all actions under this Agreement that are not the subjects of the objection will remain unchanged.
 - C. **Termination** of MOA: Any signatory to this Agreement may terminate it by providing sixty (60) days notice to the other parties, provided that the parties

will continue to consult during this period to the termination to seek agreement on amendments or other actions that will avoid termination. In the event of termination of this Agreement by the Michigan SHPO, the NNAM will comply with the provisions of 36 C.F.R § 800.6(c) (8).

- D. **Duration of** MOA: This Agreement will terminate if its terms are not carried out within five (5) years from the date of the last signature on this Agreement. Prior to such time, the NNAM may consult with the other signatories to reconsider the terms of the Agreement and amend it in accordance with Stipulation 4.A.
- E. Anti-Deficiency Act: The stipulations of this Agreement are subject to the provisions of the Anti-Deficiency Act (31 United States Code [U.S.C.] Sec. 1341). If compliance with the Anti-Deficiency Act alters or impairs the NNAM's ability to implement the stipulations of this Agreement, the NN AM will consult in accordance with the amendment and termination procedures found in this Agreement.

Execution and implementation of this MOA, evidences that NNAM has afforded the ACHP a reasonable opportunity to comment on the project and that NNAM has taken into account the effects of the undertaking on historic properties.

NAVAL AVIATION MUSEUM	
By:Robert L. Rasmussen Director	Date:
ILLINOIS STATE HISTORIC PRESERVATION OFFICER	
By: On Augustian Jak Grimes Director	Date: <u>5-13-10</u>
ADVISORY COUNCIL ON HISTORIC PRESERVATION	
By:	Date:
John M. Fowler	
Executive Director	

APPENDICES:

NATIONAL MUSEUM OF NAVAL AVIATION (NMNA) UNDERWATER AIRCRAFT RECOVERY PLAN REQUIREMENTS

References:

- (a) OPNAVINST 5750.10, National Museum of Naval Aviation
- (b) OPNAVINST 5750.4, Navy History Program
- (c) OSHA 29 CFR 1910.1200, Occupational Safety and Health Standards, Toxic and Hazardous Substances
- (d) NAVSEA S0300-A6-MAN-040, US Navy Salvage Manual, Deep Ocean Operation
- (e) NAVSEA S0300-A6-MAN-010, US Navy Salvage Manual, Strandings and Harbor Clearance Operations
- (f) OPNAVINST 8020.14, Department of the Navy Explosives Safety Policy
- (g) NAVSEA S0400-AA-SAF-010, US Navy Salvage Safety Manual
- (h) NAVSEA S0300-A7-HBK-010, Navy Salvor's Handbook
- (i) OPNAVINST 5100.23G, Chapter 7, Navy Safety and Occupational Health Program Manual, Hazardous Material Control and Management
- 1. Purpose: This document specifies procedures and requirements in the recovery of Navy-owned aircraft of historic significance.
- in underwater Navy-owned historic aircraft 2. Background: environments are, on occasion, determined to be a worthy subject for recovery for Navy purposes, specifically those purposes associated with the preservation of the history of naval aircraft. Historic aircraft are, in accordance with reference (a), the responsibility of DNMNA as may be assigned under reference (b). Historic aircraft recovery operations are highly specialized. They can also be very sensitive and are subject to scrutiny from a variety of sectors. Accordingly, essential that all of the elements of this document are treated All actions in the plan are with consideration and followed. designed to maximize safety while minimizing or eliminating adverse effects on the recovery subject and on the environment in which it is located and though which it will pass. also designed to eliminate unnecessary actions and expense.
- 3. Requirements: The requirements contained in this document apply specifically to organizations, individuals and companies providing recovery services on Navy-owned historic aircraft. They must be used as a guide in developing all recovery plans involving these aircraft. The plan must meet all Federal, state, local and other government agency requirements. Recovery Services is defined as any action leading up to and culminating

in the removal of a historic aircraft from its occupied site. assessment, discovery, search and Included are preparations for removal and removal from the site, transport, handling and preparation for delivery to designated destination. Aircraft or aircraft components are those considered by Navy significance historic some (DNHC/DNMNA) to have because of age or some circumstances associated with the history of naval aviation.

Recovery Plans will address all elements below plus any elements of the proposed recovery that may affect the undertaking not herein covered including requirements of Federal, state, local and other government agencies. A Recovery Plan must be submitted to and approved by the National Museum of Naval Aviation (NMNA) in the execution of any recovery of historic Navy aircraft from any wreck site including those from any body of water. Elements of inclusion in each recovery plan are the following documents, descriptions or narratives pertaining to the subject aircraft. In addition to these elements, additional requirements may be made part of the plan at the discretion of DNMNA.

a. Aircraft/Site Description:

- (1) Navy model designation and Bureau Number. Where a positive identification of the aircraft cannot be made through photo, video or other verified recording of its Bureau Number, provide the most probable presumption of identification and the rational for this presumption.
- (2) Documentation that was used in determining the identity of the aircraft by its location (ship's logs, accident reports, etc.).
- (3) The aircraft position on the bottom (including attitude relative to the bottom) and configuration/position of movable components of the aircraft (position of landing gear, canopy, flaps, etc.)
- (4) The physical condition of the aircraft. This should address its completeness and damage. Describe the effects of marine growth and other environmental deterioration (corrosion and decomposition, etc.), the components of the aircraft that are disconnected, their confirmed or unconfirmed presence at the site, and prospects of recovery of disconnected components or parts. Include a diagram of the aircraft in all available

aspects indicating significant damage and missing components and other aspects of this paragraph.

- (5) Munitions, fuels or other potentially hazardous devices or materials (if any) that may be on board the aircraft.
- (6) Human remains that may be on board the aircraft based on physical examination and documentation on the incident that resulted in the aircraft's present disposition.
- b. Aircraft Location: The aircraft location sufficient to determine the State having jurisdiction over the location site of the subject aircraft. A post-recovery report must provide the actual location. This must include:
- (1) The method by which the aircraft is located and identified, including still and video photography of the aircraft and associated debris field.
- (2) The site where the aircraft rests in terms of bottom conditions, approximate depth of water and any conditions that may facilitate complicate or inhibit the recovery process.
- c. Governmental Documentation: Documentation of any Federal, state, local and other government agency permitting, consultation or authorization that may be necessary to effect the recovery and any action that may have been taken or planned to effect the permitting. Handling of hazardous material, environmental issues and OSHA requirements under references (c) and (d) and controlled by federal, state and local authorities are to be included.
- d. Assessment: An assessment of the viability of a successful recovery. Include any documents, diagrams, photographs or video the Discuss to process. the applies compared to operation as differences/similarities in this previous like operations in the experience of the recovery principals and mitigating factors to deal with conditions and problems that may arise in the operation.
- e. Recovery Procedures: Description of the aircraft recovery process. Preservation of the physical integrity of the aircraft is paramount. All elements will stress the precautions to identify and minimize risk and damage dealing with hazardous material and environmental issues. Any damage that is expected

to occur unintentionally or intentionally as a result of the

recovery will be identified. The guidance contained in references (a) through (i) applies. The process must include:

- (1) Rigging method. This will include a description of the rigging equipment and materials, their capabilities and planned use.
- (2) <u>Lift method</u>: This must include a description of the vessel/craft and its equipment capabilities and planned use to raise the aircraft and place it on a transportation venue.
- (3) <u>Dewatering/desilting method</u>. Describe the means to be used in removing these and other natural materials from the aircraft.
- (4) Transportation method: This must include a description of the vessel/craft/vehicles to be used to transport the aircraft to land and once landed to the conservation/rework/restoration facility.
- (5) Disconnected parts recovery. This must include a description of the parts and the methods to be used for their recovery.
- f. Hazardous Material Handling: Describe the hazardous material and environmental remediation/mitigation process, including actions to be taken in the event of hazardous material exposure. This must include:
- (1) Munitions identification, render safe and disposal methods to meet the requirements of reference (f).
- (2) Fuel and other hazardous material removal and disposal methods.
- (3) Restoration methods to return the site to its natural state.
- g. Accountability/Preservation: Description of the aircraft accountability and preservation methods while in recovery and transit. This must include description of:
- (1) Cleaning and preservation of the aircraft in preparation for transit.

- (2) Disassembly in preparation for transportation, to include, the development of an inventory of items belonging to or associated with the aircraft, including:
- (a) Items disconnected from the aircraft as the result of the incident or the recovery operation.
- (b) Equipment in or on the aircraft not designed to be and integral part of the aircraft (drop tanks, parachutes, survival packs, personal items, rafts, non-fixed armament, etc.).
- h. Security: The physical security methods to be employed during the recovery operation. This must cover the period from the deployment of recovery personnel and equipment through the delivery to the conservation/preservation facility.
- i. <u>Safety</u>: The safety methods to be employed during the recovery process. These must meet the requirements of reference (g) insofar as they are applicable to the project.
- j. Service Provider: The organization(s)/individual undertaking the recovery. This must include the following information.
 - (1) Organization name.
- (2) Organization/Personnel, including principal officials and staff participating in the operation.
 - (3) Documentation on the organization's liability arranged for this undertaking,
- (4) Documentation on the organization's experience, including a record of successful undertakings similar to the one proposed.
- k. Reports. The recovering organization will provide NMNA with regular reports on the progress and completion of the recovery. Operational reports will be submitted weekly from commencement of the operation, and a summary final report will be submitted no later than 30 days following completion of the operation/delivery to the conservation/restoration facility. The final summary report will include:

- (1) The exact coordinates and water depth of the recovery site.
- (2) Any elements of the plan that could not be adhered to during the operation.
- (3) Still and video photography of appropriate elements of the operation.
- 4. The Director NMNA is the Navy Point of Contact for all matters relating to this subject and the responsibility and authority for execution of the provisions of this document and other laws and regulations relating thereto.

NATIONAL MUSEUM OF NAVAL AVIATION (NMNA) REQUIREMENTS FOR AIRCRAFT REWORK

References:

- (a) NAVAIR 01-1A-P509, Corrosion Control
- (b) Aircraft Type, Erection and Maintenance Manuals
- 1. Purpose and Scope: This document is a guide for the handling of Navy-owned historic aircraft or aircraft components assigned to NMNA have been identified for rework or other preparation for specifically contains the requirements use. It development of rework activities for aircraft recovered from underwater sites. However, all aircraft rework projects under NMNA auspices are subject to these requirements as they may be applicable at Director, NMNA discretion. These requirements are applicable to any organization or individual responsible to NMNA under contract or under loan agreement that includes rework in paragraph 4) on NMNA-owned historic services (defined aircraft.
- 2. <u>Background</u>: Navy-owned aircraft or aircraft components of some historic significance are occasionally placed under rework at NMNA and other venues qualified to meet standards necessary to preserve the historic value of these articles. The rework process applied to these articles will vary depending on a number of factors. However, the processes will all have commonalities that are covered in this document.

3. Responsibilities:

- a. Director, Naval Historical Center (DNHC): DNHC/Curator for the Navy is responsible for the overall management of the Navy's history program. Additionally, DNHC is responsible for the management of Navy-owned historic ship and aircraft wrecks.
- b. Director, National Museum of Naval Aviation (DNMNA): DNMNA manages the Navy's historic aircraft acquired by NMNA or placed in NMNA custody or under NMNA auspices. The ultimate authority over rework projects lies with the DNMNA. The objective of the rework in all cases will be at the discretion of DNMNA. Any deviation from these guidelines is at DNMNA discretion as are any issues having to do with a project under the guidelines that may not be herein addressed

- 4. <u>Definitions</u>: The following Definitions apply to the NMNA rework program as described in this document.
- Rework: Any action taken on a project aircraft that repair, handling, restoration, conservation involves preservation or any combination thereof. It includes the process that will be applied to the project aircraft to reach the end There are three basic processes as described in objective. 4. They are conservation, preservation restoration (or a combination of these three). The end objective these categories will be prescribed by DNMNA and described in the plan.
- b. <u>Project Aircraft</u>: The article or subject of the project which can be a whole aircraft or a component, or the equipment or related material of an aircraft identified for rework.
- c. <u>Handling</u>: The process of offloading, moving, storing and preparing the aircraft for the work to be accomplished.
- d. <u>Conservation</u>: The process of halting the effects of decay and deterioration resulting from time, ambient conditions, human contact, movement or other outside damaging influences.
- e. <u>Preservation</u>: The process that results in the maintenance of the composition and structure of an article following its conservation.
- Restoration: The process of renewing the aircraft to the appearance of a newly manufactured or operational state or to a point determined to be its most historically significant state. Action: The following requirements shall be followed as a minimum in rework projects of Museum aircraft and related The procedures used in meeting these requirements will be articulated in a plan to be submitted for NMNA approval that cover handling of the project aircraft from acceptance of the project at the work site to delivery or display. of an aircraft prior to receipt at the restoration work site is covered in other requirements instructions. The "end objective" referred to herein will be prescribed by DNMNA and be addressed References (a) and (b) must be adhered to in all in the plan. elements of the project where applicable. Procedures in the rework plan will cover, at a minimum, the following. deviation from these requirements, including additions, is at the discretion of DNMNA. Requirements of the plan and other

specific instructions on processes within the plan are as follows:

a. Plan Requirements:

- (1) <u>Handling</u>: Describe the general handling plan from receipt to placement in the rework area or storage site. Emphasis should be placed on adherence to local, state and federal regulation covering these operations including preserving the integrity of the project aircraft. Provide the security measures to be used, to prevent pilferage or other deteriorating affects that could be anticipated.
- (2) <u>Documentation</u>: Describe documentation plan. Document all processes undertaken in the project in writing and photographically to describe all actions taken, preserve accountability and specify material used and processes employed. This documentation will be submitted to NMNA as may be required by DNMNA.
- inventory of all components of the aircraft that may be removed during the course of the project with emphasis on tracking removed parts, identifying missing parts or those that may be beyond use in reaching the objective in the project and the best process to deal with the part.
- (4) Rework Narrative: Describe the work to be accomplished in the project to reach the prescribed end objective. Include sequence of work and timelines and the processes and procedures along with reference to specific requirements or regulations specified in paragraph 5 (below).
- (5) <u>Credentials</u>: Describe the credentials of the project leader and workforce with particular emphasis on experience, especially with respect to the completion of projects similar to the subject project.
- (6) <u>Security</u>: Describe security provisions in place. While in work or awaiting work, the project aircraft will be secured from unauthorized access, damaging exposure to the elements and any other vulnerability to loss or damage.

b. Processes:

- There are two basic processes: Conservation: removing foreign material from the article and eliminating or the article. deteriorating affects within mitigating Conservation is specifics of reference (a) are applicable. accomplished primarily through non-destructible removal foreign objects and material from the article to best facilitate preservation. It is understood that non-destructible rework is not always possible (removing fasteners to access areas for conservation, etc.). It should be the aim to minimize this in so far as is feasible.
- (a) <u>Cleaning</u>: Accomplished by removing all accumulated dirt, debris, marine life, surface deterioration and other material not generic to the article.
- (b) Arresting deterioration: Accomplished by removing the results of deterioration (corrosion, rot, etc.) and other affects on the article that may contribute to further deterioration or inhibit proper preservation.
- (2) <u>Preservation</u>: All conserved parts will be treated as necessary to minimize or eliminate deterioration beyond that already present. Treatment prescribed in reference (a) will be followed. If an aircraft is to be stored for more than a year, treatment must be repeated annually. Preservation is an application of deterioration inhibitors and related actions that will forestall deterioration in form, substance or composition and best prepare it for follow-on work or long term stability including structural stability and utility.
- adhere two The process will (3)Disassembly: authenticity and integrity and preserving principles: in the plan will Disassembly instructions accountability. specifically address these elements. References (a) and (b) will be adhered to as appropriate. No parts or material removed from the aircraft, regardless of condition, will be discarded without approval of NMNA.
- (4) Repair: This process will follow the principles of preserving the integrity and authenticity of the project aircraft. In dealing with the aircraft as a whole or with parts, the prioritization of treatment described in paragraph 3 will be followed and described in the plan. The plan will also describe the handling of specific elements of the project

aircraft such as the power plant, electronic and electrical systems, hydraulic and pneumatic systems, instruments and other cockpit and personal equipment, armament systems and similar systems. In dealing with these systems, the philosophy described herein and provided by the DNMNA as the end objective of the project will be emphasized and described in the plan.

- Assembling the project aircraft will Reassembly: follow the same principles contained in other elements of the It will be designed to preserve or reestablish authenticity of the aircraft and assure structural soundness. In addition, it will adhere to the applicable requirements and/or specifications of special instructions from NMNA and references It is understood that in most cases, reuse of (a) and (b). fasteners, and other material will not be possible. It is also recognized that proper preservation and treatment of many surfaces will make preservation of coatings and other original treatments not productive or possible. Painting will preformed on components that are not an integrated part of the fuselage; empennage and wing structures will be painted prior to installation. Painting specification and paint design provided by NMNA will be followed.
- will be specified by DNMNA. For NMNA purposes, restoration does not include bringing the subject to a fully operational state except as may be specified by DNMNA or for structural, aesthetic or purposes of authenticity. Preservation and Conservation are processes that always precede or are an integral part of Restoration. There are various processes within Restoration that are applicable to the project aircraft as a whole and its components. The NMNA process priority that will be followed in all rework under NMNA auspices are designed to maintain the article authenticity insofar as is possible. They are:
- (a) Reuse: Recycle the article as is without modification or alteration except as required in preservation and conservation.
- (b) Repair: Recycle the article after or in concert with preservation and conservation and work necessary to return it to an authentic appearing and/or structurally sound state.
- (c) Replace: Substitute the article for a like replacement that is authentic or, failing that, remanufactured

to specifications of the original. It is understood that there are certain elements of this process that usually cannot be repaired or reused or left in place such as paint, fasteners, fabric and other organic material, etc. Where replacement is the only alternative, authentic material will be used where ever feasible. Replacement articles must be appropriately marked and documented.